

PERSONAL INFORMATION **Assia Mariani**

## PROFILE

Graduated with a Master's Degree in Physics, specializing in condensed matter physics, non-linear optics and time-resolved pump-probe spectroscopy. Throughout my academic journey, I earned various scholarships for activities related to student support, tutoring, and successful completion of the Honours program, totaling 9533.25€

During my studies, I acquired expertise in time-resolved pump-probe Raman spectroscopy (femtosecond stimulated Raman spectroscopy, impulsive stimulated Raman scattering) applied to investigate the ultrafast optical properties of molecular systems (carotenoids, organic dyes).

## EDUCATION AND TRAINING

10/2020–31/10/2023 **Master's Degree in Physics**

Sapienza Università di Roma, Rome, Italy

**Thesis:** Unravelling excited-state molecular vibrations by chirped Raman spectroscopy

**Advisor:** Prof. Tullio Scopigno

**Final grade:** 110/110 cum laude

02/2018–10/2020 **Percorso di Eccellenza**

Sapienza Università di Roma, Rome, Italy

During my Bachelor's degree, I was admitted to the Honours program in Physics at my faculty, which involved undertaking additional courses (150 hours) for the top 30 students of each academic year, upon merit based selection ([https://www.phys.uniroma1.it/fisica/sites/default/files/allegati/stralcio\\_verbale\\_percorsi\\_eccellenza\\_L-30\\_2018-19-.pdf](https://www.phys.uniroma1.it/fisica/sites/default/files/allegati/stralcio_verbale_percorsi_eccellenza_L-30_2018-19-.pdf)). Following the successful completion of the required activities, a scholarship of 2100€ was awarded.

09/2017–19/10/2020 **Bachelor Degree in Physics**

Sapienza Università di Roma, Rome, Italy

**Thesis:** Paradosso di Klein per elettroni di Dirac nel grafene

**Advisor:** Prof.ssa Lara Benfatto

**Final grade:** 110/110 cum laude

09/2013–07/2017 **Diploma di Maturità Classica**

Liceo Classico Statale Giulio Cesare, Rome, Italy

**Final grade:** 100/100 cum laude

## WORK EXPERIENCE

11/2022-10/2023

**Internship**

Sapienza Università di Roma, Rome, Italy

Full time research activity for the realization of my Master thesis.

**Research group:** Femtoscopy group**Supervisor:** Prof. Tullio Scopigno**Duration:** 11 months**Title of the thesis:** "Unravelling excited state molecular vibrations by chirped Raman spectroscopy"**Topic:** Development of an experimental protocol for ISRS based on using a largely chirped probe pulse, namely chirped-based impulsive stimulated Raman scattering (CISRS).**Skills:**

- Optimization of experimental setups in photonics laboratories
- Optical pulse generation through non-linear processes (SHG, NOPA)
- Ultrafast laser spectroscopy
  - Transient absorption spectroscopy
  - Impulsive stimulated Raman scattering
- Data analysis with Matlab

02/2023 – 06/2023

**Academic Tutor**

Sapienza Università di Roma, Rome, Italy

Tutor for the third-year Optical Physics and Laboratory course (Ottica e Laboratorio) in the Bachelor of Physics program, upon merit based selection ([https://web.uniroma1.it/trasparenza/dettaglio\\_bando/197151](https://web.uniroma1.it/trasparenza/dettaglio_bando/197151)).

Gross compensation: € 1.017,75.

My role involved assisting students during the laboratory activities required by the course.

04/2022-06/2022

**Internship**

Sapienza Università di Roma, Rome, Italy

Internship at the Femtoscopy group for the Physics Laboratory II exam.

I participated in an FSRS experiment on fucoxanthin and I compiled a final laboratory report titled "Spettroscopia Raman stimolata al femtosecondo su fucoxantina".

02/2022 – 06/2022

**Academic Tutor**

Fixed-term collaboration (75 hours) at Sapienza Università di Roma, Rome, Italy

Tutor for the first-year Mechanics Laboratory (Laboratorio di Meccanica) in the Bachelor of Physics program, upon merit based selection ([https://web.uniroma1.it/trasparenza/dettaglio\\_bando\\_albo/183112](https://web.uniroma1.it/trasparenza/dettaglio_bando_albo/183112)).

Gross compensation: € 1.017,75.

My role involved assisting students during the laboratory activities required by the course, preparing exercises for the students, and holding weekly meeting with the students to address questions related to the lecture content or laboratory activities

07/2021 – 01/2022

**Academic Tutor**

Fixed-term collaboration (75 hours) at Sapienza Università di Roma, Rome, Italy

Tutor for the fulfillment of specific additional educational requirements (Obblighi Formativi Aggiuntivi - OFA) in mathematics, upon merit based selection ([https://web.uniroma1.it/trasparenza/dettaglio\\_bando/177799](https://web.uniroma1.it/trasparenza/dettaglio_bando/177799)).  
Gross compensation: € 1.017,75.

My activity involved collaborating in the creation of an online database of solved exercises available to students.

**STUDENT-COLLABORATION SCHOLARSHIPS**

01/2022 – 12/2022

**Student Collaboration Scholarships at the Physics Department**

Fixed-term collaboration (150 hours) at Sapienza Università di Roma, Rome, Italy  
Merit-based selection, net compensation: € 1.095,00.

Museum guide at University Museum of Physics.

I conducted guided tour for school groups, primarily high school students. The tour involved explaining the operation of some of the displayed instruments within an overview of 19th and 20th-century physics, tailored to the students' level.

01/2021 – 12/2021

**Student Collaboration Scholarships at the Physics Department**

Fixed-term collaboration (150 hours) at Sapienza Università di Roma, Rome, Italy  
Merit-based selection, net compensation: € 1.095,00.

Museum guide at University Museum of Physics.

01/2020 – 12/2020

**Student Collaboration Scholarships at the Physics Department**

Fixed-term collaboration (150 hours) at Sapienza Università di Roma, Rome, Italy  
Merit-based selection, net compensation: € 1.095,00.

Position at the Department of Physics Library (Biblioteca del Dipartimento di Fisica).

I was responsible for the lending, return, and consultation services for printed resources (books and scientific journals), and for promoting the use of online resources.

01/2019 – 12/2019

**Student Collaboration Scholarships at the Physics Department**

Fixed-term collaboration (150 hours) at Sapienza Università di Roma, Rome, Italy  
Merit-based selection, net compensation: € 1.095,00.

Position at the Department of Physics Library (Biblioteca del Dipartimento di Fisica).

**PERSONAL SKILLS**

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B2
	Cambridge English Level 2 Certificate in ESOL International (Advanced) C1 (2017)				
French	A1	A1	A1	A1	A1
	Diplôme d'études en langue française (DELFF) A2 (2012)				

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](https://www.cedefop.europa.eu/en/etools/efqr)